# (19) World Intellectual Property Organization International Bureau

emational Bureau





### (43) International Publication Date 7 July 2005 (07.07.2005)

### PCT

## (10) International Publication Number WO 2005/062647 A 1

(51) International Patent Classification7:

H04Q 7/36

(21) International Application Number:

PCT/IT2003/000850

(22) International Filing Date:

22 December 2003 (22.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): TELE-COM ITALIA S.P.A. [IT/IT]; Piazza degli Affari, 2, I-20123 Milano (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): FRANCALANCI, Indro [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT). PANICO, Massimiliano [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT).
- (74) Agents: GIANNESI, Pier Giovanni et al.; Pirelli & C. S.p.A., Viale Sarca, 222, I-20126 Milano (IT).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW.

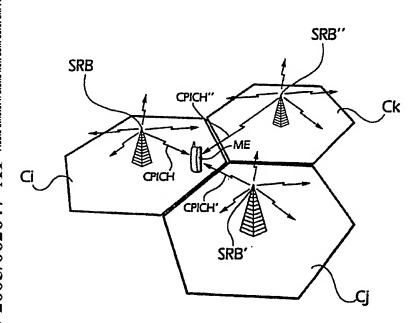
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Declarations under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: METHOD, SYSTEM AND COMPUTER PROGRAM FOR PLANNING A TELECOMMUNICATIONS NETWORK



(57) Abstract: Method for planning a telecommunications network for radio equipment including a plurality of cells distributed on a geographic area, each one of which comprises a set of elementary territory areas (pixels) adapted to receive a radio signal radiated by a respective fixed Radio Base Station, wherein a radio equipment (ME) located in a cell (Ci) is subjected to receive signals from common pilot channels (CPICH, CPICH', CPICH ") broadcast by a plurality of radio base stations (SRB, SRB', SRB "). The method includes, for each cell (C1), the estimation of the interference level provided by nearby cells (Ci, CK) to the traffic offered to pixels of the cell (C.) , related to the power difference between pilot channels (CPICH) broadcast by the base station

(SRB) of the cell ( $C_i$ ) and pilot channels (CPICH', CPICH'') broadcast by base stations (SRB', SRB'') of nearby cells ( $C_i$ ,  $C_k$ ). Such estimation is obtained depending on the amount of traffic expected in the examined pixels.

WO 2005/062647 A1 |||||||||

### WO 2005/062647 A1



patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

of inventorship (Rule 4.17(iv)) for US only

#### Published:

with international search report